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Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1-24. (Canceled)

25. (Previously Presented) A wafer inspection system comprising:

a sensor comprising an eddy current inspection coil in communication with a radio frequency generator and an eddy current detector, the sensor further comprising a first optical fiber in communication with a light source to illuminate a wafer to be inspected, the sensor further comprising a second optical fiber in communication with a light detector to detect light reflected from the wafer;

a chamber configured to house the wafer; and

a positioner configured to provide relative movement between the sensor and the wafer, the positioner comprising a positioning arm on which the sensor is disposed.

26. (Previously Presented) An inspection system as claimed in claim 25, wherein the wafer includes a film.

27. (Original) An inspection system as claimed in claim 26, wherein said sensor measures a thickness of said film.

28. (Previously Presented) An inspection system as claimed in claim 27, wherein said film comprises a conducting film.

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29. (Previously Presented) An inspection system as claimed in claim 27, wherein said film comprises a dielectric film.

30. (Original) An inspection system as claimed in claim 27, wherein said film comprises a dielectric film and a conducting film.

31. (Previously Presented) An inspection system as claimed in claim 25, wherein the sensor further comprises a modifying member, in optical communication with said first optical fiber, and configured to focus light from the light source.

32. (Previously Presented) An inspection system as claimed in claim 25, wherein the sensor further comprises a modifying member, in optical communication with said second optical fiber, and configured to focus light to the light detector.

33. (Original) An inspection system as claimed in claim 25, wherein the first and second optical fibers are disposed parallel to the eddy current inspection coil in said sensor.

34. (Original) An inspection system as claimed in claim 25, wherein the first and second optical fibers are disposed co-axially with the eddy current inspection coil.

35. (Previously Presented) An inspection system as claimed in claim 25, wherein the light source comprises a laser.

36. (Previously Presented) An inspection system as claimed in claim 35, wherein the light source emits light comprising light having a wavelength in the range from 200 to 1100 nanometers.

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37. (Previously Presented) An inspection system as claimed in claim 25, wherein the light source comprises a broadband light source.

38. (Previously Presented) An inspection system as claimed in claim 25, wherein the light detector comprises a charge coupled device.

39. (Previously Presented) An inspection system as claimed in claim 25, wherein the light detector comprises a photodiode array.

40-41. (Canceled)

42. (Previously Presented) An inspection system as claimed in claim 25, wherein the positioner further comprises an apparatus for tilting the sensor at an angle with respect to the wafer.

43. (Currently Amended) An inspection system as claimed in claim 25, wherein the positioner further comprises a positioning turntable on which the wafer is disposed.

44. (Original) An inspection system as claimed in claim 25, wherein said system comprises more than one said sensor.

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45. (Currently Amended) A semiconductor processing system comprising:  
a substrate positioner configured to position a semiconductor substrate in the processing system;

a sensor positioning system configured to position one or more sensors including a first sensor relative to the substrate and to provide relative movement between the one or more sensors and the substrate, the sensor positioning system comprising a positioning arm on which the one or more sensors are disposed; and

wherein the first sensor comprises an eddy current monitoring portion and an optical monitoring portion.

46. (Previously Presented) The system of claim 45, wherein the positioning arm is configured to position the first sensor at a pre-determined distance from the substrate in the substrate positioner.

47. (Previously Presented) The system of claim 45, further including an eddy current detection system and a light detection system in communication with at least one of the one or more sensors.

48. (Previously Presented) The system of claim 47, wherein the one or more sensors further comprises a second sensor, and further including a switching system configured to place the first sensor in communication with the eddy current detection system and the light detection system at a first time, and to place the second sensor in communication with the eddy current detection system and the light detection system at a second different time.

49. (Previously Presented) The system of claim 45, further including the substrate.

50. (Previously Presented) The system of claim 25, further including the wafer.